

CLAIM AMENDMENTS

1. (Previously Presented) A method comprising:

identifying a syntax tree representation of a relational database query, wherein the syntax tree comprises a plurality of nodes;

algebrizing the syntax tree representation of the relational database query into a relational algebra representation by performing at least two operations in a single pass through the syntax tree representation, wherein at least one of the at least two operations is selected from a group of operations comprising:

table and column binding;

aggregate binding;

type derivation;

constant folding;

property derivation; and

tree translation.

2. (Original) The method of claim 1 wherein said at least two operations are executed in a predetermined order at each of said plurality of nodes.

3. (Original) The method of claim 2 wherein

said at least two operations comprise a first operation and a second operation;

and

said second operation either executes or does not execute at each of said plurality of nodes and after said first operation based on a result from said first operation.

4. (Previously Presented) The method of claim 1 wherein one of said at least two operations comprises constant folding.

5. (Previously Presented) The method of claim 1 wherein said at least two operations comprise:

table and column binding;

aggregate binding;

type derivation;

property derivation; and

tree translation.

6-9. (Canceled)

10. (Currently Amended) A method for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, and said algebrizing comprising performing a plurality of operations, including constant folding, at each of said plurality of nodes, ~~said method comprising the inclusion of constant folding as an operation among said plurality of operations.~~

11. (Currently Amended) A system for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, said system comprising:

a processor;

a memory;

a structured query language (SQL) algebrizer, stored in the memory and executed on the processor, the SQL algebrizer configured to perform at least two operations in a predetermined order at each of the plurality of nodes, in a single pass through the syntax tree representation, ~~a plurality of operations,~~ wherein at least one of the at least two plurality of operations is selected from a group of operations, the group of operations comprising:

table and column binding;

aggregate binding;

type derivation;

property derivation; and

tree translation; and

~~a subsystem for performing at least two of the plurality of operations in a predetermined order at each of the plurality of nodes, in a single pass through said syntax tree representation.~~

12. (Canceled)

13. (Currently Amended) The system of claim 11, wherein

said at least two ~~of the plurality of~~ operations comprise a first operation and a second operation;

said SQL algebrizer subsystem ~~executes~~ said first operation before said second operation at each of said plurality of nodes, and receives a result from said first operation at each of said plurality of nodes; and

said SQL algebrizer subsystem ~~either executes or does not execute~~ said second operation at each of said plurality of nodes, on a node by node basis, based on a result from said first operation.

14. (Currently Amended) The system of claim 11 wherein each of said at least two of the plurality of operations are selected from the group of operations.

15. (Previously Presented) The system of claim 11 wherein said at least two of the plurality of operations comprise:

table and column binding;

aggregate binding;

type derivation;

property derivation; and

tree translation.

16. (Canceled)

17. (Previously Presented) The system of claim 11 wherein said algebrizing comprises one or more of:

table and column binding;

aggregate binding;

type derivation;

constant folding;

property derivation; or

tree translation.

18-20. (Canceled)

21. (Currently Amended) A computer-readable medium comprising computer-readable instructions that, when executed by a processor, direct a computing device to perform a method for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, said method ~~computer-readable instructions comprising instructions for performing~~ constant folding on said syntax tree representation.

22. (Currently Amended) The computer-readable medium ~~instructions of~~ claim 34, ~~wherein the further comprising instructions for performing the plurality of~~ operations are performed in a predetermined order at each of said plurality of nodes.

23. (Currently Amended) The computer-readable medium ~~instructions of~~ claim 22, wherein the plurality of operations comprise a first operation and a second operation; and wherein the method ~~computer-readable instructions further comprises~~ instructions for executing or not executing said second operation at each of said plurality of nodes after said first operation has executed based on a result from said first operation.

24. (Canceled)

25. (Currently Amended) The computer-readable ~~medium instructions of~~
claim 34, wherein the plurality of operations comprises:

table and column binding;

aggregate binding;

type derivation;

property derivation;

constant folding; and

tree translation.

26-29. (Canceled)

30. (Currently Amended) A computer-readable medium comprising
computer-readable instructions that, when executed by a processor, direct a computing
device to perform a method for algebrizing a syntax tree representation of a relational
database query into a relational algebra representation, said syntax tree comprising a
plurality of nodes, and said method algebrizing comprising performing a plurality of
operations, wherein the plurality of operations comprise said computer-readable
instructions comprising instructions for constant folding as an operation among said
plurality of operations.

31. (Previously Presented) The method of claim 5 wherein said at least two operations further comprise constant folding.

32. (Previously Presented) The system of claim 11 wherein said group of operations further comprises constant folding.

33. (Currently Amended) The system of claim 15 wherein said at least two of ~~the plurality of~~ operations further comprise constant folding.

34. (Currently Amended) The computer-readable medium ~~instructions of~~ claim 21, the method further comprising ~~instructions for~~ performing a plurality of operations in a single pass through the syntax tree representation, wherein at least one of the plurality of operations is selected from a group of operations comprising: table and column binding, aggregate binding, type derivation, property derivation, constant folding, and tree translation.

35. (Currently Amended) A method for algebrizing a syntax tree representation of a relational database query into a relational algebra representation, said syntax tree comprising a plurality of nodes, the method ~~comprising~~ comprising:

performing at least two operations, comprising first and second operations, in a single pass through the syntax tree representation, wherein:

said at least two operations are executed in a predetermined order at each of said plurality of nodes;

the second operation either executes or does not execute at each of the plurality of nodes, after the first operation executes, based on a result of the first operation; and

at least one of the at least two operations is selected from a group of operations comprising:

table and column binding;

aggregate binding;

type derivation;

constant folding;

property derivation; and

tree translation.

36. (Previously Presented) The method of claim 35 wherein one of said at least two operations comprises constant folding.

37. (Previously Presented) The method of claim 35 wherein said at least two operations comprise:

table and column binding;

aggregate binding;

type derivation;

property derivation; and

tree translation.